A Study to Assess the Effectivness of Laughter Therapy on Depression Among Elderly Residing in Selected Old Age Home at Dharapuram

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***Abstract*—Title: Effectiveness of laughter therapy on depression among elderly residing in selected old age home at Dharapuram Objectives: To assess the level of depression among elderly residing in selected old age home at Dharapuram, To assess the effectiveness of Laughter therapy on depression among elderly residing in selected old age home at Dharapuram, To associate the level of depression among elderly residing in selected old age home at Dharapuram with their selected socio demographic variables. Hypotheses: There is a significant difference between the level of depression among the elderly before and after Laughter therapy, there is a significant association between the level of depression among elderly residing in old age home and their selected socio demographic variables. Modified Imogene King's Goal Attainment Theory (1981) was adopted for this study. Methodology: A pre-experimental one group pretest posttest design was used. 40 elderly 60 and above 60 yrs of age were selected by purposive sampling method. The study was conducted in old age home at dharapuram, Pretest was conducted by Geriatric depression scale on the first day after obtaining consent from all the subjects then Laughter therapy was given 20 minutes twice a day for 5 Consecutive days (total 10 sessions) for the subjects. Post test was assessed on 7th day using the same tool. Findings: Laughter therapy reduced the depression level of the elderly in the old age homes. There was a significant association between posttest level of depression and age (60-70 years), sex(male), and medical illness (No medical illness), history of taking medicines (Not taking medicines) among elderly in the old age home. Conclusion: The study concluded that Laughter therapy is cost effective, non-invasive, non-pharmacological complementary and alternative therapy to reduce the level of depression among elderly.**

***Index Terms*—laughter therapy, depression, elderly, old age home**

I. INTRODUCTION

A cheerful heart is a good medicine but a broken spirit saps a person's strength over the years, many physical benefits to laughter have been repeated by doctor and health care professionals. Patients are need therapeutic effects of humor and laughter. The ability to see the humor in the situation and to laugh freely with other can be on effective way to take care of our own body mind and spirit.

One of the outstanding surveys carried out in different part of India was that depression was most common psychiatric disorder in the late life, in their epidemiological survey of rural population near Calcutta found that the prevalence of depression in subject more than 60 years is 24%.

Gero-psychiatric morbidity survey in semi urban area Madurai, found that depressive illness contributes to 67% of total psychiatric morbidity in the death spouse and lower socio-economic groups leasing to radical change in the living arrangements, loss of life. Satisfaction has been major cause for feeling loneliness and stress leading to depression. In comparing the family system and living conditions in depression and normal. It was observed from a nuclear family system and nearly 16% of them were found to be living alone.

II. LAUGHING THRAPY OF DEPRESSION PATIENT

A type of therapy that uses humor to help relieve pain and stress and improve a person sense of wellbeing. It may be used to help people cope with a serious of disease such as cancer.

Laughter therapy may include laughter exercise, shows and comedy movies, books games and puzzles. It is a type of complementary therapy. Also called humor therapy.

India has a population on 1.38 billion in 2022, [17.85]. Where 194 million [41%] elderly population are above the age of 60 years. The new era with younger generation is neglecting the quality of life of the elderly. A cross-sectional study on quality of life was conducted in Dharapuram old age home in Thirupur district. To individual in the geriatrics of population group of 60 years were interned. The basic characteristics of population survey revealed that among participants in this study, 40% we're male and 60% we're female, majority 80% belong to 60-69 years of age group. 75.7% of elderly were literate. 78.6% are married and 21.4% were widowed or unmarried

III. OBJECTIVE OF THE STUDY

✓ To assess the level of depression among elderly residing in selected old age home at Dharapuram

✓ To assess the effectiveness of Laughter therapy on depression among elderly residing in selected old age home at Dharapuram,

✓ To associate the level of depression among elderly residing in selected old age home at Dharapuram with their selected socio demographic variables.

Hypothesis

H^1: There is a significant difference between the level of depression among the elderly before and after Laughter therapy,

H^2: There is a significant association between the level of depression among elderly residing in old age home and their selected socio demographic variables.

Review of Literature

The literature was searched from extensive review from various sources and was depicted under the following headings.

1. Literature related to depression among elderly.
2. Literature related to laughter therapy on depression
3. Literature related to laughter therapy on depression among elderly in old age home.

Methodology Research Approach

The research approach is the most essential part of any research. The entire study is based on it. The Effectiveness of Laughter therapy on depression among the elderly was assessed. Therefore, a quantitative/evaluative approach was used to test the effectiveness of intervention.

Research Design

The research design is a frame work or blue print for conductor the research project. It details to procedure necessary for obtaining the information needed to structure or solve the research problem

The Research Design Is A Follows

- Pre experimental research design
- One group pretest and posttest design and randomization

Group	Pre test	Intervention	Post test
R	Q^1	X	Q^2

Keys

R- Random sampling selection of 30 elderly

Q^1-Assessment of pretest level of depression among elderly

X- Laughter therapy (20min twice a day for 5 consecutive days)

Q^2- Post test level of depression among elderly

IV. SETTING OF THE STUDY

The research setting can be seen as the physical, social, and cultural site in which the research is conducted study.In qualitative research the focus is mainly on meaning making, and the research studies the participants in their natural setting. The study was conducted in old age home at Dharapuram at Tirupur District.Currently there were sixty inmates. (Among them 37 are Females and 23 are males). The home has shared accommodation for inmates with all facilities.

The inmates actively participate in cooking, dining and gardening activities. It provides medical facilities by in connection with primary health centre Dharapuram, and it also has provision for recreation

like watching TV. They have place for religious activities like prayer, and for meeting and family sessions.

Population

The population is the organism the both belongs to the same species and live in the same geographical area, In this study population the elderly residing in old age home.

Sampling Techniques

A sampling technique is the name or other identification of specific process by which entire of sample has been selected. Sampling Technique used in the study was Non- P r o b a b i l i t y (Purposive) sampling technique. 40 elderly individuals were included in the study who fulfilled the sampling criteria.

Sample Size

The sample size is 40, samples are selected from old age home

V. DATA COLLECTION PROCDURE

A prior formal written permission was obtained from the college and the authorities of selected old age home where the study was conducted. The study sample was selected by using non-probability (purposive sampling) technique among them who fulfilled the sampling (inclusion and exclusion) criteria a total of 40 elderly were recruited in the study. Before conducting the study, a brief self-introduction and explanation regarding the nature and purpose of the intervention was given. Written and oral consent was obtained from the subjects. Geriatric depression scale was used to assess the level of depression among elderly by interview method before the intervention.

The pretest was conducted on the first day after obtaining consent from the participants. Based on the sample selection criteria, the second day onwards the therapy was given among the participants having depression as measured by the scores on depression scale. Therapy was provided through individual sessions lasting 20 min. The therapy was continued for two sessions per day for 5 consecutive days. The seventh day post test was conducted by using the same Tool. The data was collected for duration of 6 weeks from 12.8.14 to 15.9.14.

VI. DESCRIPTION OF THE INSTRUMENT

Section-I: There is no score allotted for baseline variables.

Section-II: Geriatrics depression Scale (15 points)

The investigator collected the data by interview method. It was YES or NO question type. The items were assessed by the tool scores, which was given based on the nature of questions that is in positive manner for positive type questions and in reverse manner for the negative aspect questions. The tool consisted 15 items, among which 10 items which indicate when answered Yes, and 5items which indicate depression when answered no. A total Score was provided which consists of one point from each depressive answers. Non depressive answers were scored as zero and do not add to total score.

Total Score	Levels of Depression
0-4	Normal
5-8	Mild depression
9-11	Moderate depression
12-15	Severe depression

Data Analysis and Interpretation:

The data collected was analyzed by means of descriptive statistics, and inferential statistics.

Descriptive Statistics

1. Analysis of the baseline data was done by using frequency and percentage.
2. Depression among elderly was analyzed by computing frequency, percentage, mean and standard deviation

Inferential Statistics

- Paired “t” test was used to find out the effectiveness of laughter therapy on Depression among elderly.
- Chi-square analysis was used to determine the association between the level of depression and selected socio demographic variables among elderly.

VII. THE DATA COLLECTED WERE INTERPRETED UNDER THE FOLLOWING SECTIONS

Section I

Distribution of elderly according to the socio demographic variables

Section II
Distribution of elderly according to the level of depression

Section III
Effectiveness of laughter therapy on depression among the elderly

Section IV
Association between the postt est level of depression among elderly with selected socio demographic variables.

Section I

Table 1: Distribution Of Elderly According to the Socio Demographic Variables

Socio Demographic Variable		f	%
Age	a)60- 70 years	30	75%
	b) Above 70 years	10	25%
Sex	a) Male	25	62.5%
	b) Female	15	37.5%
Religion	a) Hindu	27	67.5%
	b) Christian	7	17.5%
	c) Muslim	6	15%
	d) Others	0	0%
Education	a) No formal education	0	0%
	b) Primary education	9	22.5%
	c) Middle	18	45.0%
	d) High school	8	20.0%
	e) Higher secondary	3	7.5%
	f) Degree	2	5%
Previous Occupation	a) Govt Job	4	10%
	b) Private job	8	20%
	c) Business	6	15%
	d) Cooly	17	42.5%
	e) Unemployed	5	12.5%
Source Of Income	a) Pension after retirement	5	12.5%
	b) old age pension	14	35%
	c) Dependent on old age home	15	37.5%
	d) Savings	4	10%
	f) Support from children	2	5%
Marital Status	a) Single	0	0%
	b) Married	34	85.0%
	c) Widow/Widower	6	15%
	d) Divorced	0	0%
	e) Separated	0	0%
Number Of Children	a) No child	0	0%
	b) One child	13	32.5%
	c) Two children	22	55%
	d) Three and above	5	12.5%
Type Of Family	a) Joint family	24	60%
	b) nuclear family	16	40%
	c) Extended family	0	0%

Occupation Of Children	a) Working in abroad	3	7.5%
	b) Working in local area.	21	52.5%
	c) Working in other districts	12	30%
	d) Working in other states	4	10%
Mode Of Entry in Old Age Home	a) Voluntarily	13	32.5%
	b) Family members	24	60%
	c) Friends	3	7.5%
	d) Others	0	0%
Duration Of Stay	a) Less than one year	3	7.5%
	b) 1- 2 years	26	65.0%
	c) more than 2 years	11	27.5%
Relatives Visit Time to Old Age Home	a) Weekly once	2	5%
	b) Monthly once	11	27.5%
	c) Three months once	19	47.5%
	d) Six months once	8	20%
	e) More than six months	0	0%
Medical Illness	a) Diabetes	8	20%
	b)Hypertension	6	15%%
	b) Others	0	0%
	c) No	26	65%
History Of Taking Medicines	a) Yes	14	35%
	b) No	26	65%

The table portrays that majority of the elderly 30 [75%] were in the age group of 60-70 years, 10[25%] were in the age group of above 70 years, while comparing the sex, majority of the elderly 25[62.5%] were male and 15 [37.5%] were females.

Regarding religion, most of the elderly 27[67.5%] were Hindus and 7[17.5%] were Christians and remaining 6(15%) were Muslims.

While comparing the educational status 18[45%] have studied up to middle level (i.e.) 8th standard, 9[22.5%] have studied up to primary level (i.e.) 5th standard, 8(20%) have studied up to high school, 3 [7.5%] have studied up to Higher secondary school level (i.e.) 12th standard,2[5%] were degree, none of them had no formal education.

While discussing the previous occupational status majority of the elderly 17[42.5%] were cooly, 8[20%] were private employers, 6(15.0%) were business group, 5(12.5%) were unemployed, 4(10.0%) were govt employers.

While comparing the source of income, majority 15[37.5%] were old age home dependents, 14[35%] were old age pensioners and 5[12.5%] were retired pensioners, 4(10%) were savings dependents, 2(5 %.) were depenents upon their children.

Regarding the marital status majority of the elderly 34[85%] were married and the 6[15%] were widow / widower.While comparing the number of children majority of the elderly 22[55%] had 2 children, 13[32.5%] had 1child, and 5[12.5%] had three and above children.

While discussing the type of family, majority of the elderly 24(60%) were hailed from joint family and remaining 16(40%) were hailed from nuclear family.

Regarding the occupation of children, majority of the elderly people's children 21(52.5%) were working in the local area, 12(30%) were working in other districts, 4(10.0%) were working in other states, 3(7.5%) were working in abroad.

While comparing the mode of entry to old age home, 24[60.0%] were by family members, 13(32.5%) were by voluntary, 3(5%) were by friends.

Regarding duration of stay in the old age home 26[65%] were residing for a period from 1 -2 yrs, 11[27.5%] were residing for more than 2 yrs. 3[7.5%] were residing for less than one year.

While discussing the relatives visit time to old age home, the majority of elder's relatives 19(47.5%) visited to old age home in three months once,11(27.5%) visited to old age home in monthly

once,8(20.0%) visited to old age home in six months once,2(5%) visited to old age home in weekly once.
Regarding presence of medical illness 26[65%] did not have any illness and the remaining 8[20%] of them were diabetic patients and remaining 6(15.0%) were hypertensive patients.
While comparing history of taking continuous medications 26[65%] did not take any medications and the remaining 14[35%] of them were taking medications.

Section II

Table 2: Distribution Of Elderly According to the Level of Depression

n=40

LEVEL OF DEPRESSION	PRE TEST		POST TEST	
	f	%	f	%
Moderate	24	60%	6	15%
Mild	16	40.0%	19	47.5%
No Depression	0	0%	15	37.5%

The above table states that in the pretest majority of the elderly 24 [60%] had moderate level of depression, 16 [40.0 %] had mild level of depression. In the post test after intervention (Laughter therapy) about 19 [47.5%] had mild depression, 15 (37.5%) of them had no depression and 6 (15%) had moderate depression.

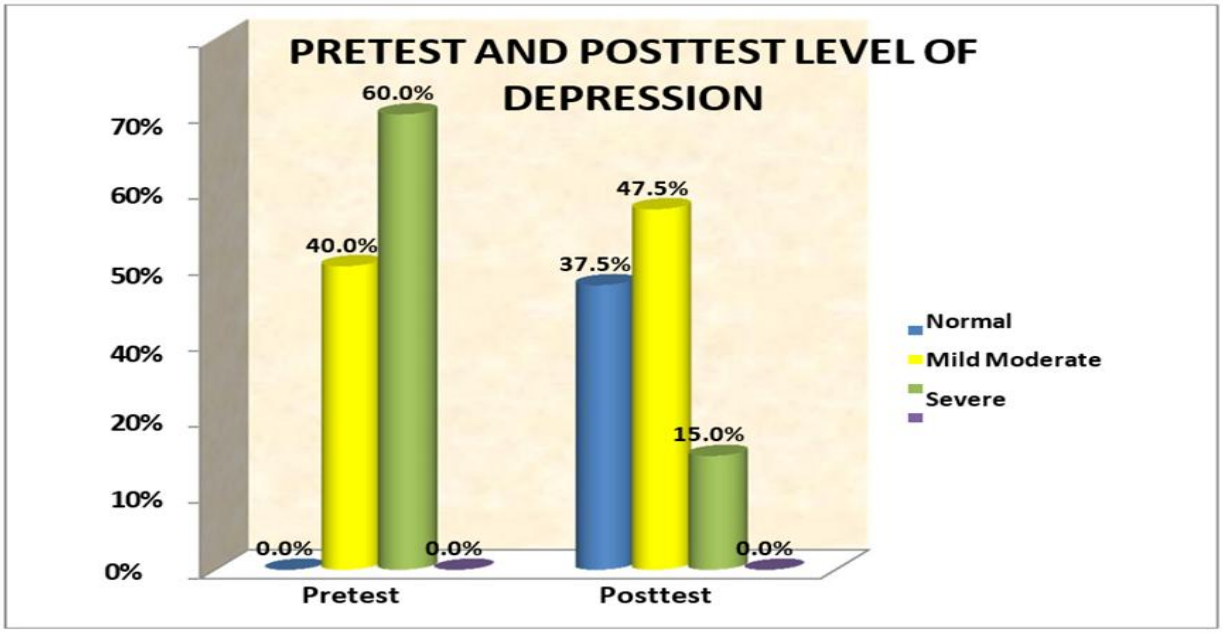

Figure:1 Cylinder diagram quotes distribution of subjects according to their level of depression among elderly.

The above diagram quotes that in the pretest majority of the elderly 24 [60%] had moderate level of depression, 16[40.0 %] had mild level of depression. In the post test after intervention (Laughter therapy) about 19[47.5%] had mild depression,15(37.5%) of them had no depression and 6(15%) had moderate depression.

Section III

Table 3: Effectiveness Of Laughter Therapy on Depression Among Elderly

	Mean	Mean Difference	SD	't' value	'P' Value
Pre Test	8.48	3.33	1.71	11.95 TV= 3.55	< 0.001
Post Test	5.15		2.16		

The table 3 depicts the Mean of the Pretest and Post test was 8.48 and 5.15 respectively and Standard Deviation of the Pretest and Post test was 1.71 and 2.16 respectively. The Mean difference was 3.33. The paired "t" test value was 11.95. This showed that there was a significant difference between the pretest and posttest level of depression. Hence it was evidenced that laughter therapy was more effective in reducing depression among the elderly

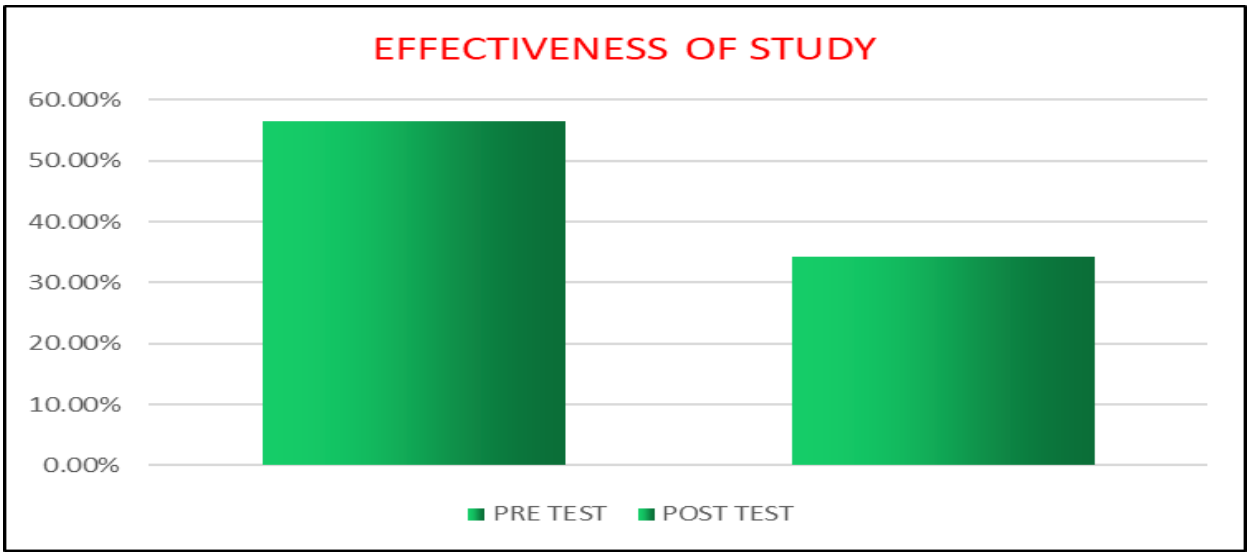

Figure. 2 : D iagram depicts the Effectiveness of Laughter therapy on depression among elderly.

Table 4: Comparison Of Mean Depression Score

n=40

	No. of spouse	Mean ± SD	Mean difference	Student's paired t-test
Pre test	40	8.48±1.71	3.33 TV = 3.55	t=11.95 P=0.001 significant
Post test	40	5.15±2.16		

Significant at 0.001

The above table 4 depicts the comparison of mean depression score between pretest and posttest. The pretest mean depression score was 8.48 with a standard deviation 1.71, whereas posttest mean depression score was 5.15with a standard deviation 2.16. Mean difference is 3.33

The student paired 't' was done to find out the difference between the pretest and post test score, 't' value 11.95 was greater than the table value which was significant at 0.001 level. This shows that the difference in the score was due to the intervention (Laughter therapy) and also this proves that the laughter therapy was effective in reducing the depression among elderly residing in old age home.

Figure 3 : Box-plot diagram portrays the mean pret est-post test score among elderly. The pretest mean score was 8.48 with a standard deviation of 1.71; whereas the postt est mean score was 5.15 with a standard deviation 2.10. mean difference is 3.33

Table 5: Comparison Of Depression Reduction Score

n=40

	Maximum score	Mean depression score	Mean Difference in depression reduction with 95% Confidence interval	Percentage of depression reduction with 95% Confidence interval
Pretest	15	8.48	3.33(2.76 – 3.89)	↓22.1% (18.4% – 25.9%)
Posttest	15	5.15		

Table 5 describes the Effectiveness of Laughter therapy on Depression among elderly in old age home.On an average, after receiving laughter therapy, elderly depression was reduced 22.1% than pretest score. Differences between pretest and post test score was analyzed using proportion with 95% Confidence interval and mean difference with 95% Confidence interval. This 22.1% reduction score shows the effect of laughter therapy on depression among elderly.

VIII. DISCUSSION

This chapter deals about the results of the study interpreted from the statistical analysis. Old age is not a disease but it affects every aspect of their life, better psychological perception about their life tends to reduce their depression and this in turn improves the quality of life among elderly. It gives soul to the universe, wings to the mind, flight to the imagination, a charm to sadness gaiety and life to everything. It is the essence of order, and leads to all that is good and beautiful. The present study was conducted to evaluate the effectiveness of laughter therapy on depression among elderly residing in selected old age home at Dharapuram.

IX. CONCLUSION

The study findings brought out the following conclusion

- There was a significant difference between mean pretest and mean post test depression scores among elderly in old age home at P< (0.005) level of significance.
- There was a significant association between the level of depression and age, sex, medical illness, and history of taking medicines among elderly in the old age home.
- There was no significant association between the post test level of depression and the other socio demographic variables such as religion, education, previous occupation source of income, and marital status, number of children, type of family, occupation of children, and mode of entry, duration of stay, relatives visit time to old age home at P<0.05 level of significance.

X. RECOMMENDATIONS

- Based on the findings of the study, the recommendations offered for future research were
- A similar study can be conducted, replicated on a large sample to generalize the study findings.
- A similar study can be conducted with experimental research design having control group and experimental group.
- A comparative study can also be done to compare the effect of laughter therapy with other therapies such as touch therapy, massage therapy, cognitive behavior therapy, hug therapy etc.
- A similar study can be conducted by using a qualitative approach (Phenomenological) on feelings of elderly in the old age homes.
- A similar study can be conducted as comparative study between elderly residing in old age home and elderly residing in their homes.

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